

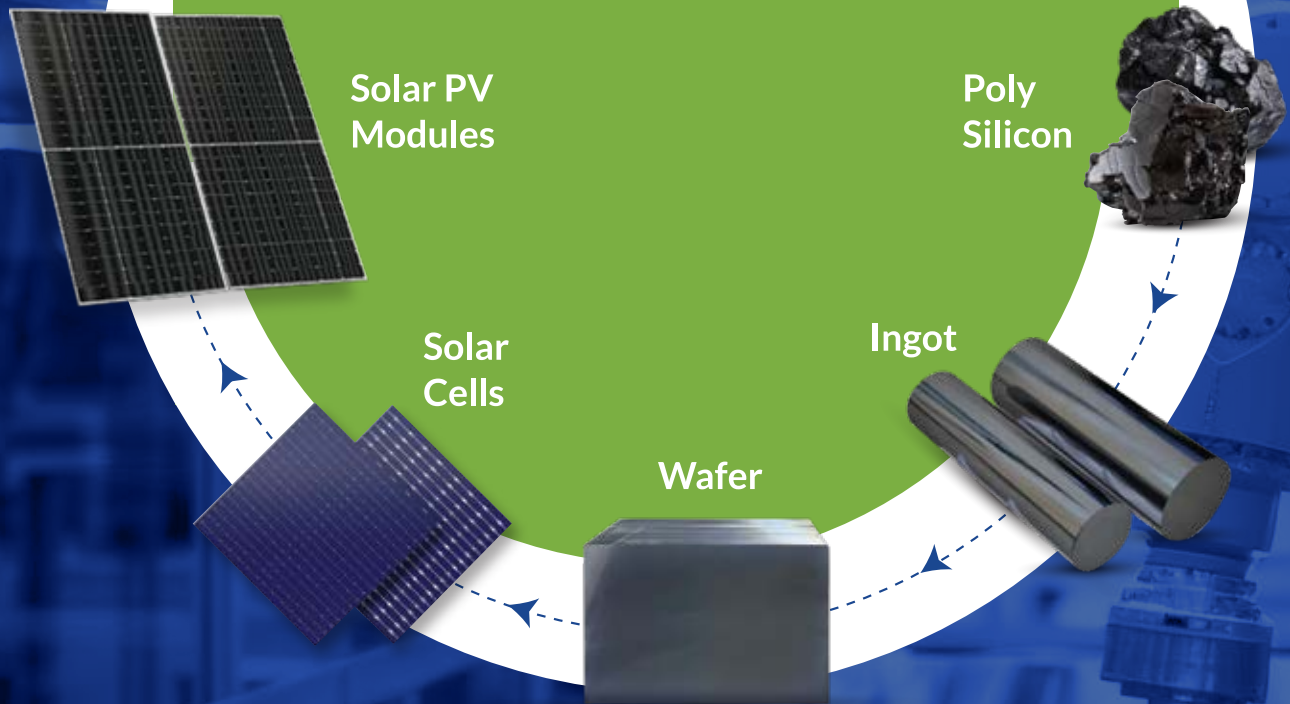


Innovating Today
for a Brighter Tomorrow



avaadaelectro.com

Backward Integration



Certifications



Avaada Group: Harnessing Nature's Potential for Sustainable Progress

Avaada Group is India's diversified energy conglomerate, driving advancements in Solar PV Manufacturing, Renewable Energy, Pumped Storage Projects, Green Data Centers, Battery Energy Storage Solutions and Green Hydrogen & its derivatives - including Green Ammonia and Green Methanol.

As the solar PV manufacturing arm of Avaada Group, Avaada Electro was established with a bold vision to transform the global solar landscape. The company is a key player in next-generation solar technologies, such as N-Type TOPCon solar modules, known for their superior energy yield, reliability, and adaptability across global markets.

Avaada Electro operates ALMM- and BIS-certified module manufacturing facilities in Dadri (Uttar Pradesh) and Butibori (Maharashtra), with a third facility is currently under development in Greater Noida (Uttar Pradesh). The Butibori plant, one of India's most advanced module manufacturing hubs, runs at a Takt time of 16 seconds and features AI-integrated, self-adaptive production lines and smart energy management systems.

The Dadri facility, powered by green energy, integrates AI-powered defect detection systems that outperform human inspection in precision and reliability. Avaada Electro's facilities also leverage cloud computing and real-time energy analytics to minimize environmental impact, aligning with our commitment to greener, smarter manufacturing.

Business Segments



**Solar PV
Manufacturing**



Renewable Energy



Green Fuels



**Energy Storage
Solutions**



**BESS: Battery Energy
Storage Solutions**



Green Data Centers



Integrated Value Chain

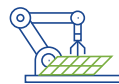
Avaada Electro is redefining solar manufacturing in India through a deeply integrated value chain that sets new industry benchmarks for performance, scalability, and quality. Our backward-integrated approach spans the entire solar manufacturing spectrum—from ingot and wafer production to PV cells and finished modules—all centralized within a single, state-of-the-art facility spread across 200+ acres in Avaada Electro Super Factory, Nagpur. To support this ecosystem, we are also establishing ancillary manufacturing units for critical components such as solar glass, aluminum frames, junction boxes, encapsulants, and packaging materials, ensuring full supply chain control and operational agility.

This end-to-end integration enhances quality assurance, ensures seamless production, and significantly reduces environmental impact through optimized logistics and minimal reliance on imports. It aligns seamlessly with the Atmanirbhar Bharat vision, reinforcing India's role as a global leader in clean energy manufacturing.

Our USP



Legacy of Trust and Performance - Backed by Avaada Group's strong IPP legacy and 6+ GW of renewable energy projects commissioned, Avaada Electro brings unmatched reliability, on-time delivery, and proven execution capabilities.



Integrated & Scalable Manufacturing - Avaada Electro offers end-to-end, quality-controlled production at scale—ensuring consistency, speed, and global compliance (IEC, UL, ALMM, BIS). We are among the Grade A solar module manufacturers globally.



High-Efficiency, Future-Ready Technology - Our high-performance TOPCon and bifacial modules are engineered for long-term output, better temperature coefficients, and superior LCOE performance—suitable for utility, rooftop, and export-grade projects.



Customer-Centric, Partnership-Led Approach - We don't just sell modules—we build partnerships. Avaada's dedicated sales, technical, and service teams support customers throughout their project lifecycle, making us the preferred partner across geographies.



Green Energy-Powered Manufacturing - Avaada modules are proudly made in India using renewable energy-powered facilities, reducing carbon footprint across the entire product lifecycle and aligning with global sustainability mandates.

Scaling New Horizons in Solar Manufacturing

Avaada Electro operates world-class automated & AI enabled manufacturing facilities, powered by Green Energy & strategically located across India.

Operational Production Line



7 GW Module

Nagpur Super Factory
Maharashtra



1.5 GW Module

Dadri Giga Factory
Uttar Pradesh



Enlume

"N" Topcon Technology | G12 - G2G

Bifacial - Glass to Glass | 132 Cells | 700 - 720 Wp | 23.18% Efficiency

23.18%
Efficiency

720 Wp

18 BB



Up to 30% Additional Power Generation Gain

Additional power gain from rear side depending on albedo



LOW LID (Light Induced Degradation)

TOPCon cells have low LID, because of its N-Type silicon substrate



Lower LCOE

High bifaciality, high power output, saving BOS cost



Better Weak Illumination Response

Wide spectral response, higher power output even under low-light settings like smog or cloudy days



Better Temperature Coefficient

TOPCon cell has a better temperature coefficient which help in better performance in hot climate



Wider Applicability

Vertical installation, snowfield, high-humid area

Technical Data

Enlume

Mechanical Specification

Specification	Details
Solar cells	N type TOPCon, MBB 132 Cell
Encapsulation	POE/EPE/EVA
Back glass	2.0mm, Semi Tempered Glass
Front glass	2.0mm, Anti-Reflection Coated
Frame	Anodized Aluminum Alloy
Dimensions	(L) 2384 mm x (W) 1303 mm x (H) 35mm
Weight	38 kg
J-box	IP 68 certified, 3 diodes
Cable	Solar cable 4 mm ² , length 1000 mm / customized
Connectors	MC4-compatible connectors

Operating Properties

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
Power Tolerance	0 to 5 W
Bifaciality factor (As per Lab)	80± 5%

Temperature Coefficient

NOCT(Nominal Operating Cell Temperature)	45°C (±2°C)
Temperature Coefficient of Pmax	- 0.30%/°C
Temperature Coefficient of Voc	- 0.25%/°C
Temperature Coefficient of Isc	0.04%/°C

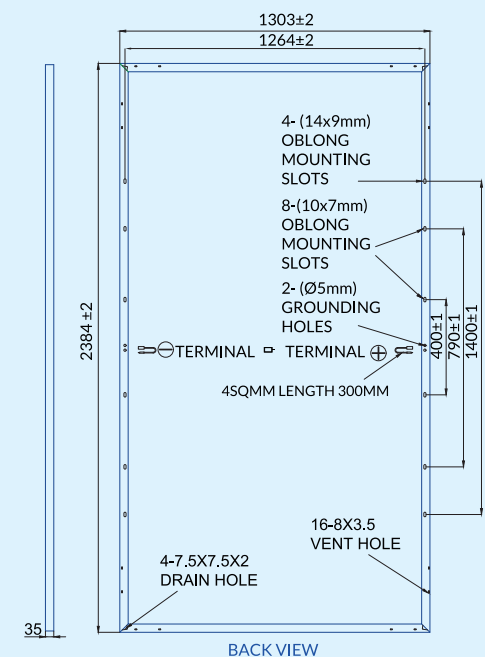
Certificates[†]

ALMM | BIS | IEC 61730 | IEC 61215 | UL 61730 | IEC 62804(PID) |
IEC 61701 (Salt Mist) | IEC 61716(Ammonia) IEC 62782 | LID, LeTID |
IEC 60068(Sand & Dust) | CEC | CE

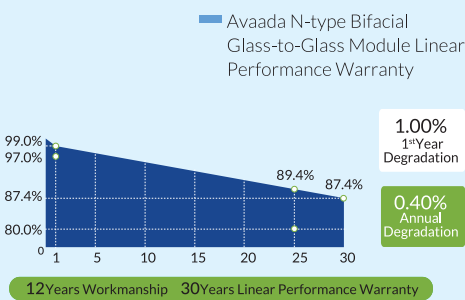
Packing Configuration

Container - 40'HQ
Modules per Pallet - 31
Pallets per Container - 20
Modules per Container – 620

Dimensions in mm



Dimensions in mm



For 30 years with 1% for 1st year degradation and 0.40% from year 2 to year 30

*Warranty claim is only applicable in the case if AEPL's manual guidelines are followed



Enlume

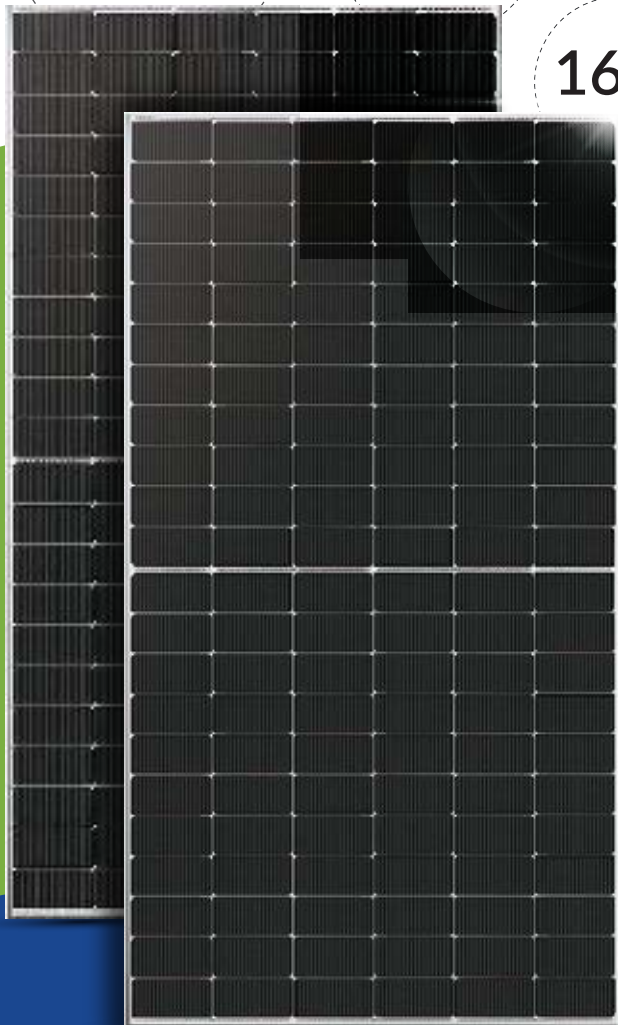
"N" TOPCon Technology | G12R - G2G

Bifacial - Glass to Glass | 144 Cells | 610 - 630 Wp | 23.3% Efficiency

23.30%
Efficiency

630 Wp

16 BB



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Wide spectral response, higher power output even under low-light settings like smog or cloudy days



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Enlume

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Back glass	2.0mm, Semi Tempered Glass
Front glass	2.0mm, Anti-Reflection Coated
Frame	Anodized Aluminum Alloy
Dimensions	(L) 2382 mm x (W) 1134 mm x (H) 35mm
Weight	34 kg
J-box	IP 68 certified, 3 diodes
Cable	Solar cable 4 mm ² , length 1000 mm / customized
Connectors	MC4-compatible connectors

Operating Properties

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
Power Tolerance	0 to 5 W
Bifaciality factor (As per Lab)	80± 5%

Temperature Coefficient

NOCT(Nominal Operating Cell Temperature)	45°C (±2°C)
Temperature Coefficient of P _{max}	- 0.30%/°C
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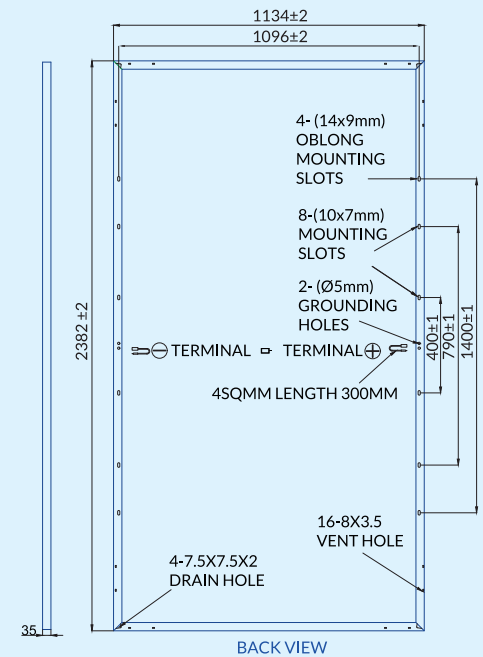
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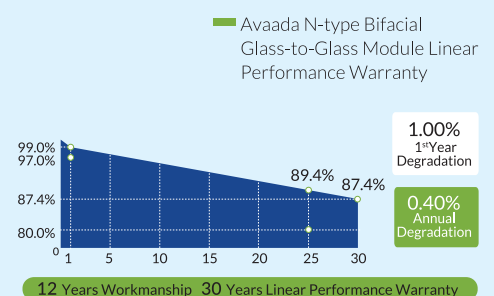
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Integlow

“N” TOPCon Technology | M10L - G2G

Bifacial - Glass to Glass | 144 Cells | 585 - 610 Wp | 23.60% Efficiency

23.60%
Efficiency

610 Wp

16 BB



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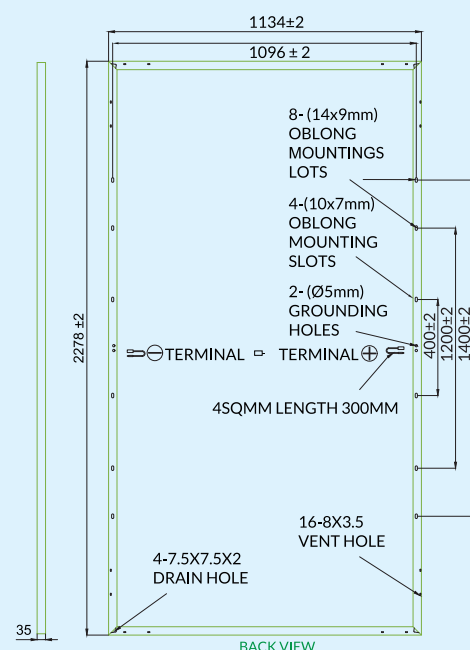
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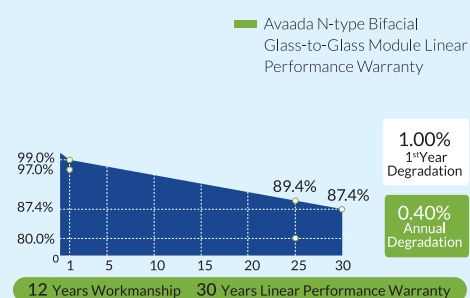
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